(3 Hours)   [Total Marks : 100

N.B. : (1) Question No. 1 is **compulsory**.
    (2) Attempt any **four** questions out of remaining **six** questions.
    (3) Assume **suitable** data wherever **required**.

1. (a) Explain the following with example :–   10
    (i) Repeater
    (ii) Hubs
    (iii) Bridges
    (iv) Switches
    (v) Router.
  (b) Explain the layers details of OSI and TCP/IP Models.   10

2. (a) Explain the major componets of telephone networks.   10
  (b) Explain the error detection and error correction algorithms.   10

3. (a) What is CRC ? Write the algorithm for computing checksum and explain with   10
    suitable example.
  (b) Explain the following with examples :–   10
    MAC address, IP address, Socket, Baud rate, Latency.

4. (a) Differentiate between the following :–   10
    (i) Protocol and Interface
    (ii) Connectionless and connection oriented service.
  (b) Explain and compare the following :–   10
    Ethernet, Token Bus and Token Ring.

5. (a) Explain CSMA/CD.   10
  (b) List the features of bluetooth and explain the network formation process.   10

6. (a) Explain : FDMA, TDMA and CDMA.   10
  (b) What are different types of routing ? Explain Distance vector routing.   10

7. (a) What are the congestion prevention policies ? Explain the congestion control   10
    in virtual circuit and datagram subnets.
  (b) Write note on : SONET.   10